What is claimed is:

1. A digital television (DTV) transmitter, comprising:

an input means for receiving a digital video data stream including normal data and robust data;

an encoding means for coding the digital video data stream into data symbols; and

a transmitting means for modulating and transmitting an output signal of the encoding means,

wherein the encoding means performs trellis coding on the robust data by mixing and using a plurality of methods.

2. The DTV transmitter as recited in claim 1, wherein the encoding means maps the normal data into any one data symbol of {-7,-5,-3,-1,1,3,5,7}.

3. The DTV transmitter as recited in claim 1, wherein the encoding means includes:

a robust encoder for coding the robust data into 2-bit data symbols; and

a trellis encoder for outputting a data symbol of any one level among predetermined levels expressed in three bits based on the 2-bit data symbols.

4. The DTV transmitter as recited in claim 3, wherein the robust encoder encodes robust data by mixing and using a P-2VSB method and an E-4VSB method.

5. The DTV transmitter as recited in claim 4, wherein the robust encoder encodes robust data by further adding and using a 16-state E-8VSB method.

6. The DTV transmitter as recited in claim 3, wherein the robust encoder encodes robust data by mixing

and using a P-2VSB method and a 16-state E-8VSB method.

7. The DTV transmitter as recited in any one of claims 4 to 6, wherein the robust encoder maintains the distance of robust data packets encoded in the P-2VSB method to be not less than three packets.

8. The DTV transmitter as recited in any one of claims 1 to 6, wherein the encoding means further includes:

a data randomizer for randomizing an output signal of the input means;

a Reed Solomon (RS) encoder for performing RS encoding on output signals of the data randomizer;

a robust interleaver/packet formatter for interleaving only robust data among output signals of the RS encoder and performing reconstruction into robust data packets based on a robust data coding rate; and

a data interleaver for interleaving an output signal of the robust interleaver/packet formatter.

9. A digital television (DTV) receiver, comprising:

a receiving means for receiving a transmission signal including normal data and robust data and converting the received transmission signal into a baseband signal;

an equalizing means for determining a symbol level of the transmission signal;

a trellis decoding means for performing trellis decoding on the symbol whose level has been determined; and

a decoding means for outputting a digital video data stream with respect to the trellis decoded signal,

wherein the trellis decoding means performs trellis decoding on the robust data by mixing and using a plurality of methods.

10. The DTV receiver as recited in claim 9, wherein

the trellis decoding means decodes the determined symbol level into two-bit data symbols by mixing and using a P-2VSB method and an E-4VSB method.

11. The DTV receiver as recited in claim 10, wherein the trellis decoding means performs decoding by further mixing and using a 16-state E-8VSB method.

12. The DTV receiver as recited in claim 9, wherein the trellis decoding means decodes the determined symbol level into a two-bit data symbol by mixing and using a P-2VSB method and an E-8VSB method.

13. The DTV receiver as recited in any one of claims 9 to 12, wherein the decoding means includes:

a data deinterleaver for deinterleaving an output signal of the trellis decoding means;

a packet formatter/robust deinterleaver for reconstructing robust data among output signals of the data deinterleaver into robust data packets formed of information data and deinterleaving the reconstructed robust data packets;

a Reed Solomon (RS) decoder for performing RS decoding on output signals of the packet formatter/robust deinterleaver;

a data derandomizer for derandomizing output signals of the RS decoder; and

a demultiplexer for demultiplexing output signals of the data derandomizer.

14. A digital television (DTV) transmitting method, comprising the steps of:

a) inputting a digital video data stream including normal data and robust data;

b) coding the digital video data stream into data

symbols; and

c) modulating and transmitting an output signal of the encoding step b),

wherein trellis coding is performed on the robust data in the encoding step b) by mixing and using a plurality of methods.

15. The DTV transmitting method as recited in claim 14, wherein the normal data are mapped to any one data symbol of {-7,-5,-3,-1,1,3,5,7} in the encoding step b).

16. The DTV transmitting method as recited in claim 14, wherein the encoding step b) includes:

b1) coding the robust data into 2-bit data symbols; and

b2) outputting a data symbol of any one level among predetermined levels expressed in three bits based on the 2-bit data symbols, which is trellis encoding.

17. The DTV transmitting method as recited in claim 16, wherein the robust data are encoded by mixing and using a P-2VSB method and an E-4VSB method in the robust encoding step b1).

18. The DTV transmitting method as recited in claim 17, wherein robust data are encoded by further mixing and using a 16-state E-8VSB method in the robust encoding step b1).

19. The DTV transmitting method as recited in claim 16, wherein robust data are encoded by mixing and using a P-2VSB method and a 16-state E-8VSB method in the robust encoding step b1).

20. The DTV transmitting method as recited in any

one of claims 17 to 19, wherein distance of robust data packets encoded in the P-2VSB method are maintained to be not less than three packets in the robust encoding step b1).

21. The DTV transmitting method as recited in any one of claims 14 to 19, wherein the encoding step b) further includes:

b3) randomizing the input signal;

b4) performing RS encoding on an output signal randomized in the step b3);

b5) interleaving only robust data among output signals of the RS encoding step b4) and performing reconstruction into robust data packets based on a robust data coding rate, which is packet formatting; and

b6) interleaving an output signal of the robust interleaving/packet formatting step b5).

22. A digital television (DTV) receiving method, comprising the steps of:

a) receiving a transmission signal including normal data and robust data and converting the received transmission signal into a baseband signal;

b) determining a symbol level of the transmission signal;

c) performing trellis decoding on the symbol whose level has been determined; and

d) outputting a digital video data stream with respect to the trellis decoded signal,

wherein the trellis decoding is performed on the robust data in the trellis decoding step c) by mixing and using a plurality of methods.

23. The DTV receiving method as recited in claim 22, wherein the determined symbol level is decoded into a two-bit data symbol in the trellis decoding step c) by mixing

and using a P-2VSB method and an E-4VSB method.

24. The DTV receiving method as recited in claim 23, wherein the trellis decoding is performed in the trellis decoding step c) by further mixing and using a 16-state E-8VSB method.

25. The DTV receiving method as recited in claim 22, wherein the determined symbol level is decoded into a two-bit data symbol in the trellis decoding step c) by mixing and using a P-2VSB method and an E-8VSB method.

26. The DTV receiving method as recited in any one of claims 22 to 25, wherein the decoding step d) includes:

d1) deinterleaving output signals of the trellis decoding step c);

d2) reconstructing robust data among output signals obtained in the data deinterleaving step d1) into robust data packets formed of information data, which is packet formatting, and deinterleaving the reconstructed robust data packets;

d3) performing Reed Solomon (RS) decoding on output signals of the packet formatting/robust deinterleaving step d2);

d4) derandomizing output signals of the RS decoding step d3); and

d5) demultiplexing output signals of the data derandomizing step d4).

27. A digital television (DTV) transmission signal, comprising:

normal data information mapped to any one data symbol of {-7,-5,-3,-1,1,3,5,7};

robust data information which are trellis encoded in P-2VSB, E-4VSB, and/or E-8VSB methods and mapped to any one

data symbol of {-7,-5,-3,-1,1,3,5,7};

robust data trellis coding method information; and

a robust data flag information for identifying the normal data and the robust data,

wherein the transmission signal is a Vestigial Side Band (VSB) modulated signal.

28. The DTV transmission signal as recited in claim 27, wherein the normal data information and the robust data information are interleaved to be mixed with each other, and the robust data information include a header information to have backward compatibility.